DOCUMENT RESUME

ED 429 947 SP 038 438

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TITLE Teacher Thinking and Student Diversity.
PUB DATE 1999-04-23
NOTE 31p.
PUB TYPE Information Analyses (070)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; Context Effect; *Diversity (Student); Educational Change; Elementary Secondary Education; Higher Education; Preservice Teacher Education; *Teacher Attitudes; Teacher Effectiveness; Teacher Expectations of Students; Teachers; Teaching Experience

ABSTRACT

This review investigated the available literature on diversity and its relationship to teacher thinking. The literature review produced 36 studies, from which five categories emerged: beliefs teachers hold about student diversity and student performance; effective teaching in diverse settings; the impact of teacher experience on teacher cognition and practice; the impact of context variables on teachers' responsiveness to diversity; and the impact of preservice education on teachers' beliefs and practices. The paper discusses each of the five categories in detail and closes with a discussion of the implication for theory and practice. Implications from the review suggest that teachers come with distinct beliefs and conceptualizations about diversity. These beliefs influence what teachers know, and the environment in which they work contributes to the implementation of classroom curriculum and policy. Principals can influence teachers' self-efficacy, commitment, and collegiality and be catalysts for change. These factors can contribute to an inclusive school environment that promotes diversity. Educational reform that addresses the needs of diverse students must examine what teachers know and the environment in which they work. (Contains 48 references.) (SM)

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ED 429 947

TEACHER THINKING AND STUDENT DIVERSITY

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April 23, 1999

SP038438

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Teacher Thinking and Student Diversity

ABSTRACT

The reciprocal influence of teacher thinking and diversity is the subject of this research investigation. Thirty seven studies examined the beliefs and practices of teachers in diverse settings. The impact that experience, context variables, and preservice education had on teachers and students was explored. Factors were identified that may produce teachers who can effectively meet the divergent needs of students. Research indicates that educational reform must consider the needs of students and their teachers who must teach an increasingly diverse student popoulation.

Teacher Thinking and Student Diversity

Christine Moore

Introduction

With the increasing emphasis on inclusive education, questions are being posed about the reciprocal influence of teacher thinking and diversity. Studies are emerging that are trying to identify how teachers' beliefs and other cognitions about ethnicity and student performance can influence classroom interaction and academic success of students. Teachers are being encouraged to critically evaluate their environment and to question those practices that may promote stereotypes and the perpetuation of a dominant culture (Jennings, 1995). If teachers can raise personal levels of critical consciousness, in other words, to critically evaluate their relationship to the environment in which they live and work, and foster that consciousness in their students, schools may become a less threatening environment where healthy productive students can develop (Freire, 1973).

Diversity and its relationship to teacher thinking is another piece in the puzzle of developing effective teachers. This review focuses on this relationship.

The review of the literature on teacher thinking and diversity produced 37 studies from which five categories emerged:

- Beliefs teachers hold about student diversity and student performance
- Effective teaching in diverse settings
- The impact of teacher experience on teacher cognition and practice
- The impact of context variables on teachers' responsiveness to diversity
- The impact of preservice education on teachers' beliefs and practices

I discuss each in turn, and close with a discussion of the implication for theory and practice.

Teacher Beliefs and Student Performance

Researchers suggest (Barry & Lechner,1995; Byrnes, Kiger,& Manning,1997; Fuchs, Fuchs,&Phillips,1994; Gillette,1996; Ilmer, Snyder, Erbaugh, & Kurz, 1997; Ogunniyi, Jegede,Ogawa,Yandila,&Oladele,1995; Richard Powell,1996; Rios,1996; Sweet,Guthrie,

& Ng,1998;Sieburth,1996) that what a teacher believes about students will influence student performance. The review of literature for this section developed into distinct areas: intellectual diversity, cultural diversity, and how teacher perceptions of that diversity influences teacher and student interactions. Those interactions ultimately affect student performance.

In the area of intellectual diversity, Fuchs, Fuchs and Phillips (1994) conducted a study using 42 elementary and middle school teachers. A questionnaire was administered to teachers using a 9-item scale (Classroom Standards Scale). It measured the strength of their beliefs about the importance of good work habits. Student academic achievement was measured by a pre and post test and compared to the teachers' performance on the questionnaire. Two-way ANOVA was used to determine teachers; responsiveness to student performance ($p=<.05$). Three-way ANOVA was used to determine standardized academic growth ($p=<.01$). The results of the study suggested that teachers with high classroom expectations effected greater achievement in students of all ability levels. In fact, students with low-achievement levels demonstrated the greater effect. The researchers noted that teachers who held stronger beliefs about work habits *appeared* to engage in more appropriate instructional methods which seemed to produce higher achievement among learners.

Sweet and Guthrie (1998), examined teacher perceptions of high and low achievers' intrinsic motivation for reading. A total population of 374 lower to middle income students were rated on six aspects of motivation by 68 teachers. Data was collected from teacher interviews and videotapes and compared to the rating score on the student interview. There was a convergence between the ratings and the interviews; however, teachers gave lower attributions to peer motivation in the interviews than in the questionnaires. Analysis also revealed that teachers perceived lower achievers as motivated by extrinsic reading activities (activity based-reading about events that the student has actively participated) while higher achievers were autonomous learners

(individual and topical-students who choose their own reading materials around their interests) with intrinsic reading motivation. This belief influenced how teachers taught reading.

In a four year longitudinal study of two second career teachers, Richard Powell (1996), explored how a teacher's prior experience, beliefs about knowledge and schooling contexts combine to influence a teacher's ability to implement classroom curriculum. Through interview and observation Powell noted that the participants beliefs about the students' abilities and cultural backgrounds also determined what was implemented. This was reinforced by Amy, a teacher participant, who believed that curriculum must connect with the students. She supplemented district curriculum with materials that she thought that students could relate to their lives. She took risks to teach alternative curriculum because of district and departmental pressures to teach the prescribed lessons.

Cultural diversity and its effects on student-teacher interaction was explored in studies conducted by Barry and Lechner (1995); Byrnes and Kiger(1997); Gillette (1996); Ilmer, Snyder, Erbaugh, and Kurz (1997); Ogunniyi, Jegede, Ogawa, Yandila, and Oladele (1995); and Sieburth (1996). All researchers concluded that knowing the cultural background of students is important for the success of teacher and student interaction.

Byrnes and Kiger (1997) investigated several factors that were hypothesized to determine teachers' attitudes about language. The researchers examined if previous exposure to language-minority children produced positive attitudes. They explored the possibility that region of the country could influence teacher attitudes about minority students depending on the amount of exposure to diversity. The effects of formal training, education level, and grade level taught were examined in the study.

The participants were 191 regular classroom teachers enrolled in teacher-education courses in Arizona, Utah, and Virginia. Arizona was chosen because teachers would encounter a large population of Spanish speaking students; Utah, because of the Asian

and Pacific-Island students who speak Vietnamese, Hmong, and Tongan; and Virginia because of students who speak nonstandard, black English. Teachers were administered the *Language Attitudes of teachers Scale* (Byrnes & Kiger, 1994). It consisted of 13 attitude statements concerning language diversity using Likert-type responses.

Results from the study indicated teachers who are exposed to language diversity possess positive attitudes about diversity. Recommendations endorsed inservice and teacher education programs that prepare teachers to work more effectively with minority children. Formal training was recommended as an integral part of preparing teachers to work with language-minority children. Teachers need resources in easy access as support for teaching diverse student populations. Graduate training increases greater sophistication in teacher thinking encompassing language diversity. The amount of ethnic diversity in the region where teachers teach is a variable in how positive teachers attitudes are about language diversity.

Gillette's study focused on seven white student teachers in a predominately African American school. Through logs, evaluation forms, and video tape, the study revealed that exposure to unfamiliar people and environments is insufficient to affect teacher's attitudes. Commitment and open-mindedness is what Gillette perceived to be an important element in becoming culturally relevant. Culturally relevant teachers are those who believe that success is possible for every student. They are teachers who see themselves as part of the community and those who give back to the community. They help students make connections within the community. An example of a culturally relevant teacher was identified and used as a case study for data collection. This student teacher researched the community in which she would be student teaching, developed culturally relevant curriculum, assumed responsibility for the outcome of the lesson, and expressed an interest in teaching students of color.

This study was limited to a small study group and to the interpretation of the researchers. No reliability or validity was given in the study.

Barry and Lechner (1995), studied a sample of 73 preservice teachers. They were asked on a questionnaire about their awareness of multicultural issues in their classroom and how they may address such issues. The participants responded that they were aware that they needed to work with students from diverse populations but did not understand how to approach the task. They weren't sure how teacher preparation programs could help them address diverse populations within the context of the classroom.

The knowledge of what teachers bring to the classroom and its importance in the teaching and learning process was the premise of the study conducted by Ogunniyi et al.(1995). The researchers wanted to identify the nature of the worldview presuppositions held among a group of science teachers from nonwestern cultures. Science teachers from Botswana, Indonesia, Japan, Nigeria, and the Philippines contributed to a population of 250 participants in the study. After reading eight fictitious stories, the participants responses were divided into four large categories: magic and mysticism; metaphysics, parapsychology, and pseudoscience; spiritism; and rationalism and science. Percentage of responses were tabulated.

Findings of the study revealed that science teachers: 1) often hold deficient views about the nature of science 2) after schooling, science teachers may hold views that may compete with rather than replace their worldview presuppostions 3) science teachers from nonwestern cultures do not distinguish between the scientific and nonscientific worldviews. Teacher in the study appeared to be influenced by nonscientific viewpoints when teaching science. The researchers concluded that science teachers need to be able to make the distinction between what they teach and what they believe.

Raters and judges were used to judge the stories in the study; however, evidence of reliability and validity was not given. Interesting questions were raised as a result of the study. Do science teachers in the western world hold multiple worldview suppositions? Do they teach what they believe or compartmentalize? Should worldviews held by science teachers be replaced?

Reck and Reck (1993) and Sieburth (1996) conducted studies that examined teachers reactions to student ethnicity and cultural origins. Sieburth used a sample of four 9th grade Puerto Rican and El Salvadorian students in a bilingual math class at a Boston high school. Through interview of students and teachers, it was discovered that teachers have a general knowledge of all students; however, that knowledge may not be accurate. The interesting part of the study revealed that teachers of the same ethnic background may or may not be able to engage the same culture students. The fact that Latino teachers and Latino students have varied differences, social class, degree of ruralness, urbanness, and acculturation are variables that may lead to a gap in student-teacher understanding.

Reck and Reck (1993) explored the stereotyping and prejudice of Appalachian students in schools. A 17-item test was given to 25 high school teachers that was designed to illicit perceptions of Appalachian and non Appalachian students. He found that Appalachian ethnicity was based upon symbolic (ethnic identity) and structural (boundedness of the group) dimensions rather than cultural ones. Appalachian and non-Appalachian teachers constructed these ethnic categories the same way. The Appalachian teachers distanced themselves from their ethnic backgrounds through their middle-class status. This status provided them with the means to "negotiate" themselves out of a negative identity. This gap supported the findings in Sieburth's study. These studies illuminate why teachers with the same cultural background as their students may not be alternative sources in helping to reduce the prejudice and stereotyping that the ethnic student may experience. Teachers from diverse backgrounds are often viewed as the dominant culture by the minority student.

Francisco Rios (1996) explored the role that teacher expectations play upon student success. The study consisted of 16 teachers. The researcher interviewed and tape recorded each subject. Data revealed that teachers base their knowledge about multicultural education on personal experience and not on academic training. Interviews indicated that teacher expectations of students may have a negative impact on student

learning. Only one teacher stated that students wanted to learn. One fourth of teachers surveyed stated that the students could learn. The researcher noted that the interviews took place at the end of the school year when many teachers feel "burn out". Results may have been different if the survey was administered at a different time.

Two studies probed the complex issue of teachers' perceptions of students based on gender and race and the disparity in student performance. Plucker (1996) studied 56 teachers in high schools located in the Northwest, New England, Northeast and Mid Atlantic. Avery and Walker (1993) focused on 152 preservice teachers at the University of Minnesota. In the Avery and Walker study, two open ended questions measured students' perception of gender and ethnic differences in academic achievement. A coding taxonomy was used to analyze the responses. No validity or reliability was given for the system of rating. From the survey, 87% of respondents stated that society contributed to the disparities in female and male academic achievement. The survey further revealed that 71% of the participants identified the influence that schools contributed to male and female achievement. To the contrary, only 54% and 56% of those responding identified society and school respectively as contributing to academic achievement in ethnic groups. They concluded that preservice teachers were most likely to assign gender differences in academic achievement to society and ethnic differences to the ethnic culture.

Plucker (1996) surveyed 56 science and math teachers and discovered that teachers are concerned about gender inequity in their classroom. Respondents believed that women were underrepresented in quantitative disciplines regardless of familiarity with research on equity issues in science and math. It was interesting to note that teachers who reported little to no familiarity with research were slightly less likely to believe the underrepresentation. A conclusion drawn from this study revealed that teachers thought that science and math is important for both genders; however, they believe that boys take a greater interest, are more confident, and have higher achievement in math and science

than girls. Teachers do not see themselves as being the cause of gender differences. They are often not familiar with the probable causes or with the effectiveness of their interventions. When teachers use them, they are often short term or "one-shot" techniques in the form of curriculum modification and classroom strategies rather than program strategies. Some teachers felt that interventions are a form of reverse discrimination or that they do not need to use interventions.

Johnson (1992) investigated how the relationship between teachers' beliefs and practice influence the cognitive activity that teachers' engage in during literacy instruction. Participants in the study included 30 ESL teachers from urban and suburban areas. The participants were administered a total of three instruments. The *Ideal Instructional Protocol* analyzed how teachers described an ideal ESL classroom in regard to instructional characteristics. They were asked to describe what procedures they might use given a certain setting. The *Lesson Plan Analysis Task* was designed for teachers to select one of three methodological approaches to the same grammatical concept. Teachers selected a lesson plan according to their beliefs. Teachers were classified as either skill-based, rule-based or function-based. The *Beliefs Inventory* measured a teachers beliefs about second-language learning and teaching and classified them according to skill, rule, or function-based learning.

Case studies were used to triangulate the data. Chi-square analysis determined the relationship between type of the instructional unit and the teacher's theoretical beliefs. Data indicated that the majority of teachers possess clearly defined theoretical beliefs which reflect one methodological approach-skill, rule or function-based learning. The study did not seem to infer what limitations of the project. Johnson concludes that more studies are needed that explore other facets of teachers' belief systems and the influence on instructional practice.

The review for this section indicates that teachers' beliefs about work habits and intrinsic reading motivation influenced their instructional methods. Teachers' beliefs and

prior experience with cultural diversity determines what curriculum is implemented. A teacher with the same ethnic background may not help to reduce stereotyping and prejudice that students feel because the teacher is often viewed as the dominate culture. In most studies, teacher training about diversity helped to reduce negative feelings about the minority student. It was recommended that teacher training emphasize teaching methods that meet the diverse needs and interests of learners. It was endorsed that teachers know about the community. Curriculum and instruction should be relevant to the students to help themselves and the teacher connect with the community.

Effective Teaching in Diverse Settings

Some studies tried to isolate the qualities effective teachers possess that influence a student's competence in the classroom. Rebecca Payne's study (1994) utilized two instruments: the Dogmatism Scale Form and the Teacher Efficacy Scale. Both scales have reliabilities of .85 and .79 respectively. She examined the importance of the teacher to African American and Hispanic students of lower socioeconomic status (LSES). the Surveys were administered to 1600 junior high school students and 70 teachers in four public junior high schools in the San Francisco area. Student input for the study was limited to an anonymous survey that involved each student rating their teachers positively and negatively. The results lead the researcher to identify 21 teachers who were the most significant in the students lives. Those teachers who were identified from the survey were selected to take part in the study.

Researchers created transcripts and records from the observations of the targeted teachers. From the results of the data collection it was concluded that significant teachers tend to be more open to self-examination. They were more organized and articulate. They drew from student response and used reinforcement praise that circulated throughout the class. They used higher order questioning and were empathetic to students.

Observers perceived ineffective teachers as: offering a low level instruction, lacking in intellectual vigor, teaching at a slower pace, boring, having ineffective classroom management, detached from what was happening in the classroom, and having little regard for the students.

Relich (1996) in his study using 16 teachers in Sidney, Australia, noted that high concept teachers (teachers who were more motivated, inventive, and creative about how to conduct math lessons) possessed many of the characteristics that Payne (1994) identified. Those teachers had positive role models as children. Low concept teachers (teachers who were negative and complained more) may provide inappropriate role models for students. The data for the study was collected from a *Self Description Questionnaire* utilizing a 14 scale instrument that measured self-concept. Respondents rank their score on a continuum. It has a reliability of median alpha=.89. The teachers were also interviewed on issues related to self-concept formation.

Roth (1995) in a Canadian high school, video taped classroom conversations as part of the data collection for the study. The study consisted of forty six 11th-grade students and one teacher participated in the study. Teacher and student interaction using a computer-based Newtonian microworld was recorded using audio tape and observations. The study revealed that students who actively participated in scientific talk together with the teacher were raised to a level where they can gain an understanding of scientific canon. The study affirmed that effective teachers' interactions with students become an integral part of a student's development toward discursive competence (the development of analytical reasoning).

Cothran and Ennis (1997) discovered that effective teaching takes place when both the teacher and student share in the control of learning. Resolving issues of conflict and power between teacher and student gives way to a reciprocal power environment where both are engaged in the learning process. To test this hypothesis, our physical education teachers and 51 students were observed, interviewed, and compared to identify common

themes. Conflict existed between teachers and students over the focus of the class. Often teachers would use their authority to resolve the conflict. Students would rebel and withdraw from the class. When student's needs, values, and interests were met, through the implementation of curriculum that both teachers and students valued, mutual involvement occurred that enhance the learning process.

When it comes to diversity and teacher effectiveness, an interesting study surfaced about the role that concrete and abstract thinking plays in teacher's multiethnic beliefs. One hundred and twenty three middle school teachers participated in the study conducted by Johnson and Johnson (1996). The schools studied were located in two southeastern states. A modified version of a "Belief Systems Test' was given to measure subjects conceptual thinking levels. A "Multiethnic Climate Inventory" was administered to assess multiethnic beliefs. A correlational analysis was used to determine if racial beliefs were linked to thinking styles. The results showed that "Concrete" thinkers tend to be more racially biased and more accepting of majority dominance and minority suppression. "Abstract" thinkers are more flexible and tolerant of diverse populations. Effective teachers aim to increase their capacities for greater abstractness. Principals can encourage abstract thinking by exposing teachers to a wide variety of experiences incorporating several domains of learning. Inservice training that encourages new ideas and information would be recommended.

Rios (1996) in a study that was examined earlier, discovered that teachers gave negative remarks more consistently to minority students than positive remarks. It is disturbing to note that such bias occurs in classrooms. One way to reduce classroom bias might be through computer conferencing. Harrington and Hathaway (1995) suggest that it may be a means by which assessment and transformation of teachers beliefs about diversity can take place. Some scholars support the notion that an effective way to empower those who are powerless is through dialogue interaction (McLaren as quoted by Gore, 1993, p.99). The researchers endorse computer conferencing as one way to allow

students the opportunity to discuss educational issues with peers in a nonthreatening way. It allows students to form collegiality, problem solve, use their own dialogue, and reflect. Computer conferencing also may reduce the environment that encourages students to hide beliefs. The study was conducted using a sample of 27 preservice elementary teachers. Transcripts from student responses during computer conferencing were used to collect data. Results from the study indicated that conferencing challenges students to identify beliefs, reexamine beliefs, and subject them to more complex and critical ways of thinking.

In this section, several studies tried to identify those qualities that effective teachers possess. A theme emerged from the studies. Effective teachers are more positive, organized, articulate, and open to new ideas. They draw from student needs and responses, and use reinforcement praise. They are motivated and creative and had positive role models as children. Effective teachers aim to increase their capacities for greater abstractness. Computers can be a means to reduce barriers to bias and open communication between teacher and student and between peers.

The Impact of Teacher Experience on Teacher Cognitions and Practice

What teachers know and how that knowledge is expressed in their teaching has been the focus of some research. An interesting study from China by Connelly, Clandinin and He (1997), explored how one teacher's personal practical knowledge is developed in the interactions and experiences (landscapes) that come into play on a daily basis. A case study was the focus of this ethnographic research. Fieldnotes, interviews, conversations, journals, autobiographical writing, teacher stories, family stories, photographs, and oral histories were used to examine their influence on teacher's classroom practice. Analysis of the data revealed that a teacher's knowledge is interwoven with image (how a person knows their teaching and life); rules, practical principles, personal philosophies (principles in a persons life that might be embedded in a broader more comprehensive philosophy); metaphor (gives imaginative expression to personal practical knowledge

which may illuminate hidden intellectual understanding within the context of the metaphor); life cycles, rhythms (a large portion of teachers knowledge is connected to cycles and rhythms); and narrative unities (the threads that help to determine the way that teacher construct stories in their teaching). Data from the case study reveled that teachers have a knowledge of the environment in which they work. They become the experts to consult when policy and guidelines are implemented. Teachers knowledge is essential in improving educational practice. Connelly et al. (1997) emphasized that if reform is to take place, educational experts must be concerned with what teachers know and the environment in which they work if policy and curriculum is to be implemented.

Berger (1993), Brophy and McCaslin (1992), and Sieburth (1996) conducted studies that indicated how experience impacted teacher cognitions and practice. Sieburth (1996) conducted a study that was conducted in a Boston urban high school. Using 32 staff members, teachers, and administrators, an interview was conducted. Those interviewed were asked how they perceived their role concerning at-risk students and at-risk Latino students. The interviews revealed an agreement among the respondents that knowing the culture and background of students is important so that it can be incorporated into the classroom. Teachers hold a general knowledge about all students but that knowledge may not be accurate. Similar to the findings of Reck and Reck (1993), Sieburth discovered that teachers of the same ethnic background may or may not be able to engage the same culture student. Social class, degree of ruralness, urbanness, and acculturation may create greater differences. Seiburth observed that new teachers bring a fresh eye to policies and curriculum which may help to determine how the educational needs of the diverse student population should be addressed. Veteran teachers were often entrenched in tradition making it difficult to look critically at teaching practices.

Brophy and McCaslin (1992) conducted a study involving 98 experienced elementary teachers. The teachers were identified by their principals as being either outstanding, or average at handling problem students. The participants were asked to view two vignettes

and describe their strategies for handling 12 types of problem students depicted in the videos. The participants were also interviewed to identify patterns of teaching behavior. The data indicated that experienced teachers often handled problem students from their own experience, from trial and error, and from common sense psychology. These strategies are often similar to research-based strategies; however, the researchers indicated that teachers could benefit from systematic instruction in identifying and reacting to chronic behavior problems. Instruction could help them reduce strategies that are counterproductive and increase a more professional response to negative behavior. They discovered that experienced teachers generally made appropriate decisions about managing students in the classroom. This gives support to the power of experience based learning which is how most teachers acquire their knowledge of classroom management. They also discovered that urban and rural settings are similar when it comes to classroom management. They stated that urban schools are often viewed as rough and unmanageable. This notion judges urban schools unfairly which only adds to the perpetuation of the stereotyping of families, children and neighborhoods.

Gertrude Berger (1993) conducted a study two year study in Russia to determine if the effects of a nation in crisis affected the morale of teachers. Through interview and questionnaire, she studied 200 secondary school teachers in St. Petersburg Russia. Teachers ranged in ages from 20 years to over 60 years. It might be mentioned that the average monthly salary for teachers in Russia is 3000 rubles or $6.00. Sixty four percent of the teachers taught in specialized schools compared to 36% in regular schools. Specialized schools focus in certain areas such as math, physical education, science, technical education, and humanities. Two themes emerged from her data. Factors that contributed most to teachers' pessimism or optimism was age and workplace. Teachers under 60 years (55%)were more likely to be optimistic compared to only 13% of those over 60 (13%). The researcher attributed this pessimistic attitude to data from a large public opinion survey of attitudes concerning political change. Aging and dissatisfaction

was reinforced by the fact that the older generation was resistant to change and were still influenced by beliefs held under the Stalin regime (Finifter, 1992).

Where teachers worked influenced teacher morale. The teachers who taught in specialized schools were more optimistic than those who taught in regular schools. The researcher identified variables that contributed to an optimistic view in specialty schools. In specialized schools, teachers were able to make decisions about curriculum and teaching methods. The principals at specialized schools were catalysts for change and encouraged creativity among teachers. The community was also involved in the schools and participated in the learning process. This philosophy encourages autonomy and professionalism of teachers.

Reid, Vasa, Maag, and Wright (1994) explored the perceptions of experienced and non-experienced teachers of attention Deficit Hyperactivity Disorder (ADHD). Questionnaires were used which indicated that inexperience promotes lack of confidence which impedes teacher performance. Less experienced teachers also rated lack of communication with physicians, lack of training, and lack of student materials as significant barriers in teaching. Experienced teachers expressed more confidence in helping students with ADHD learn. They also expressed more confidence in their ability to set up effective behavior contracts. Both experienced and non-experienced teachers expressed that insufficient time to administer interventions, lack of training, a large class size, and severity of student problems are barriers when teaching the diverse population of special needs students.

The impact of teacher experience on practice was revealed in this review. Studies disclosed that experienced teachers often handled problem students from their own experience. The implication of these studies supports teacher mentoring programs through preservice education programs. Teachers should have a voice in the reform process because they are the experts in the environment in which they teach. This voice can influence teacher morale and optimism. Data revealed that veteran teachers may be

more resistant to change while novice teachers could bring fresh views to policies and curriculum especially when it impacts the diverse student population. Teachers of color may not relate to students of color because students view them as part of the ethnic majority. Insufficient time to administer interventions, lack of training, large class size, and severity of student problems were identified as barriers when teaching diverse populations.

The Impact of Context Variables on Teachers' Responsiveness to Diversity

Connelly et al., (1997) states that teachers are not isolated beings. There are many factors which influence how, what, and why teachers teach. Teachers are often restricted by context variables which can limit the teacher's ability to meet the diverse needs of students. Roeser and Midgley (1997) conducted a study that assessed how teachers' view their role in helping to meet the mental health needs of students. Through interview and survey, the study determined to what extent teachers took responsibility for their students' mental health. Teachers who had greater self efficacy emphasized learning, mastery, and enjoyment in the classroom, and experienced a diminished sense of burden. Teachers who emphasized relative ability and competition among students experienced an increased sense of burden. Student data provided insight that indicated a correlation between their attitude concerning school and the teachers feeling of burden. The more negative the students felt about school, the greater the burden expressed by their teacher. They also discovered a significant relationship between the school location and the greater feelings of burden. The more urban the school, the greater the feeling of burden was perceived by experienced by teachers. Larger and poorer schools tend to be housed in urban areas and have greater populations of students at high risk. Student populations with more difficulties affect teachers.

Jewett, Tertell, Taylor, Parker, Tertell, and Orr (1998) also investigated the overload that some elementary teachers experience when helping students with disabilities and their families start school. The study involved four experienced pre-school and primary

school teachers. Reflective journals provided the data for the study. Teachers expressed an overload with the demands and responsibility of helping students make the transitions into school. Teachers wanted collaborative and communicative skills reinforced between teachers and schools where the students were to be mainstreamed. The data indicated that schools need to acknowledge and understand the stress that teachers, students, and families experience by providing support personnel. These services ensure student and teacher success.

Three studies revealed that school climate can effect how teachers are able to meet the diverse needs of students. One study conducted in Canada by Stanovich and Jordan (1998) involving 22 teachers and 12 principals from 12 schools, revealed that principals are important determinants of school culture. School norms set by principals may affect the instruction that teachers offer in heterogeneous classroom settings. The principal can be a catalyst in staff development promoting collaboration within the school. The importance of a collaborative environment is one where teachers learn effective teaching strategies, methods, and adaptations that can help to meet the diverse needs of student learning.

Lack of time and resources influenced the beliefs of special education teachers, and bilingual teachers in a study by Rueda and Garcia (1996). Using questionnaires semi-structured interviews, classroom observation, and classroom "products", the study examined the literacy/reading beliefs and practices of the three groups. The data revealed that no group showed a favorable attitude toward bilingualism/literacy. No group supported a single view of instruction and had differences in their beliefs about assessment. The researchers found that the effects of beliefs were mediated by content variables such as the need to teach English to the students, the lack of time, and the limited resources. Prior training could account for the differences in group practice and the effect on teachers beliefs and practices.

Does the school climate contribute to a teachers' feeling of self efficacy? Chester and Beaudin (1996) discovered that beginning teachers' self-efficacy beliefs are influenced by several variables. One hundred seventy three new teachers were surveyed in a Connecticut school district. Survey results indicated that a decline in self efficacy is mediated by age and prior experience. Older novices seemed to be more positive in efficacy beliefs than younger novices. Age had little effect on changes in self-efficacy beliefs if that individual had prior experience. The importance of a collegial school culture to new teachers' urban districts was confirmed. The higher the collegiality in a school, the higher the self-efficacy in the individual regardless of age. The observation of the novice teacher and providing feedback several times during the year increased the teachers self-efficacy beliefs. Feedback without validating and improving the individual's teaching practices resulted in feelings of uncertainty, anxiety, and neglect. The researchers also support the belief that evaluation contributes to the commitment of the teacher to the school goals.

Using structured and unstructured ethnographic interviewing, Susan Tancock (1995) conducted a study that explored the perceptions of reading specialists and classroom teachers concerning a Chapter 1 program. Data sources consisted of documents and interviews with the participants. The data revealed that specialists constructed their roles differently with each classroom teacher with whom they worked. Each participant had their own interpretation of the program. There was a lack of joint planning time and classroom observation which could account for the diversity of definitions of the program. Tancock recommended that all teachers who teach under the Chapter one program be given time for communication and coordination of programs.

Evidence of reliability and validity of the study was limited to the researchers observations and interpretation of the data. The Chapter 1 program was never clearly defined nor the type of student that qualified for the curriculum. It appeared that the program was a reading intervention for at-risk students.

Some studies revealed that environment in which teachers and students interact effected teaching and learning outcomes. Teachers feeling of burden was diminished by emphasis on self-efficacy, mastery, and enjoyment. The feeling of teacher burden increased with student competition, negative student attitudes, and where the school was located. Data revealed that student populations with more difficulties effect teachers negatively. Collaborative environments are essential for teachers to learn effective teaching strategies, methods, and adaptations to help meet the diverse needs of students. Lack of time and resources effected how and what was taught to bilingual students.

The Impact of Preservice Education on Teachers' Beliefs and Practice

An area gaining an increasing amount of attention is that of preparing preservice teachers to address the needs of a diverse population (Banks, 1991; Tatto, 1996; Zeichner, 1993). Maria Tatto (1996) conducted a study using 113 faculty members, 552 students entering teaching programs, and 265 students exiting teaching programs from five universities located in different regions across the United States. Through interview, questionnaire, and observation, she discovered that cultural norms are strongly engrained in students. Most teacher education programs have little impact on the teaching and management of diverse learners. The data revealed that successful programs adopt constructivist approaches to teaching and learning. Their program objectives include philosophy, goals, opportunities to learn, and immediacy to the school classroom. Successful programs closely mentor students and encourage student teachers to focus on student diversity.

Ross and Smith (1992) also discovered that teacher education programs may be able to help preservice teachers develop the knowledge and attitudes necessary to work with multicultural students. A study was conducted with six preservice teachers. Through their class work, reflective journals, supervision observation, and interview, researchers concluded that class work integrated with field experience can reinforce concepts learned in education courses. These findings give strong support to teacher education programs

who expose students to field experiences early in their college career. This exposure can help to diminish negative stereotypes that student may hold. Those students who come to a program with strong beliefs may be limited in their acceptance of new beliefs. Prior exposure to diverse populations may influence a teacher's ability to accept new beliefs about diversity. The results of the study were limited to the interpretation of the researchers and the perceptions of students interviewed. Case studies were prepared on the data from student interviews. Themes were isolated from the data and conclusions were drawn from that information.

Garcia (1984) noted that students who had prior experience with diverse learners, had a stronger desire to teach diverse learners and were more open-minded to concepts offered by college courses. This study indicates that exposure to people of diverse backgrounds may be one step in narrowing the gap when teaching in multicultural settings.

New (1996) also endorsed a program for preservice teachers that exposes students to urban classrooms. This study focused on teacher interactions and perceptions of African-American male achievement. Case studies were developed from two kindergarten student teachers observed by researchers. A pre and post conference was held at each observation session. Results revealed that teacher expectations (preconceived beliefs, stereotyping, and prejudice) may contribute to the academic failure of male African American students. Results of this study were limited to the interpretation of the researchers. It was recommended that teacher preparation courses provide opportunities for students to develop an awareness of their thinking, perceptions, and expectations for the achievement of all male students of color. New recommended an elimination of curriculum across all disciplines that reinforces and perpetuates ignorance and stereotypes. Emphasis was placed upon requiring all teacher education and faculty to participate in an assertive multicultural curriculum that challenges intolerance and racism.

Artiles and McClafferty (1998) reiterate a common theme in this literature review. Teachers enter training with distinct beliefs and conceptualizations about diversity. Their study explored how 17 preservice teachers used research findings and theory to reconstruct their knowledge about teaching culturally diverse students. Concept mapping and surveys were used to collect the data for the study. Their findings seemed to support the belief that students are in the process of reconfiguring and forming their beliefs about multicultural teaching. This supports the notion that teachers transform their cognitions and philosophy as they cultivate their practice.

Preexisting beliefs in preservice teachers concerning gender bias was studied by Lundeberg (1997). Like Artiles & McClafferty (1998), Lundeberg discovered that the strength of those beliefs often manifest themselves in subtle ways. For example, male students participate more in class and teachers reinforce this pattern, male students receive more attention and feedback from teachers, teachers rarely wait more than five seconds for response and rarely call on student non-volunteers (Bailey, 1988; Biklen & Pollard, 1993; Sadker & Sadker, 1986; Sadker, Sadker, & Steindam, 1989).

Lundeberg (1997) wanted to investigate how teacher educators can prepare prospective teachers to recognize inequity and promote equity in the classroom. Using a sample of 48 preservice teachers enrolled in an Educational Psychology class, the students participated in class readings, examined case studies, completed research assignments in which they interviewed, observed, and studied pupils, participating in field experience. The researchers videotaped discussions, observed and interviewed students after they had watched a video tape on classroom interaction. Classroom inequality, depicted in the videotape, was recognized by 71% percent of the students. The findings indicated that the intervention raised student awareness of the subtle gender biases in a classroom. How the beliefs changed was unclear to the researchers; however, courses to help examine beliefs and attempt to alter them was endorsed. Lundeberg suggests that raising awareness through social interaction and systematic inquiry may

help to minimize gender bias in the classroom. The data for this study was limited to the observation and interpretation of two students from each section. A quiz was given to students with the data confined to their perceptions on gender issues in the classroom.

VanDyke, Lapp, & Flood (1998), discovered that if preservice teachers are exposed to literature representing various cultures in book discussion format, that it may help preservice teachers increase their cultural understandings. They studied 29 student teachers as they read and discussed six different fictional stories written by various Mexican-European and African-American authors. As the discussions were unfolding, the sessions were videotaped. Students wrote responses in journals. The researchers indicated that this method helped to develop awareness and is only one way that preservice teacher can be exposed to different cultures. The study was not clearly presented and did not have validity evidence. Ethnic groups were used but no ethnic breakdown was given.

In an effort to address the issue of lack of teacher input in contemporary school reform, Ilmer and Snyder (1997) surveyed and interviewed three groups of teachers: 45 expert teachers, 18 student teachers, and 10 education faculty in Detroit elementary schools. They wanted to isolate factors that could be identified as fundamental good teaching in an urban setting. How do experienced urban teachers' voices compare with other teachers? Open-ended statements were given to the three groups of participants. Those statements focused on critical knowledge, skills, attitudes, environmental factors, student characteristics, and professional preparation experiences that affect successful urban teaching. The three group responses were compared using Chi-Square. All three groups identified that the knowledge of the community and culture and the need to bring compassion and diligence to classrooms was critical. Experienced teachers and student teachers identified children's needs as being more important than the university teacher educators. Instructional methods and techniques were viewed as important to the experienced and teacher educators but not as important to the student teachers.

The study supports the notion that urban teachers and urban teacher educators working in partnership can improve efforts to prepare preservice teachers for diverse settings. Urban teachers can bring knowledge and experience to the college experience that will strengthen teacher preparation programs.

The review in this section indicated that most teacher education programs have little impact on the teaching and management of diverse learners. Class work integrated with field experience seems to have the greatest impact in reinforcing concepts learned in education classes. Recommendations were made in support of programs that provide opportunities for students to develop awareness of perceptions and expectations of achievement of all male students of color. Courses designed to help students address these issues were recommended.

Implications

Implications for teacher education programs emerged from the literature review. Gillette (1996), recommends that teacher education programs help to reduce preconceived ideas of novice teachers which tend to be negative and erroneous about diverse learners. Gillette (1996), Johnson et al. (1996), and Payne (1994) all concluded that "culturally relevant" teachers displayed commitment, open-mindedness, and critically reflected on practice.

University faculties across the country tend to replicate the demographics of the teaching population which is white, monolingual, and ignorant of diversity. To eliminate the perpetuation of ignorance, universities should recruit and support a diverse faculty to help train prospective teachers. Novice teachers need support in changing attitudes and beliefs concerning classroom diversity. Collaboration must take place between teacher educators, school districts, community agencies and institutions to connect the work of the university to practice (Gillette, 1996).

Teachers come with distinct beliefs and conceptualizations about diversity. Those beliefs influence what teachers know and the environment in which they work contribute

to the implementation of classroom curriculum and policy (Connelly et al. 1997). Teachers transform their cognitions and teaching repertoires as they refine their practice (Artiles & McClafferty, 1998; Brophy & McCaslin, 1992; Chester & Beaudin, 1996; Garcia, 1994; Payne, 1994; Rueda & Garcia, 1996;).

Principals can influence the self efficacy, commitment, and collegiality of a faculty. In addition, principals can be catalysts for change and encourage teacher creativity. These factors can contribute to an inclusive school environment where diversity is promoted (Berger, 1993; Chester & Beaudin, 1996).

Educational reform that addresses the needs of the diverse student must examine what teachers know and the environment where teachers work. These variables can influence how policy and curriculum is implemented which ultimately impacts the diversity of student learners.

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